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NOTIFICATION OF TRANSMITTAL
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OF THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
(PCT Rule 72.2)

Date of mailing (day/month/year)
17 February 2005 (17.02.2005)

To:

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17.02.2005

Applicant's or agent's file reference
78401 WO P GEB-FRI

IMPORTANT NOTIFICATION

International application No.
PCT/EP2003/007161

International filing date (day/month/year)
04 July 2003 (04.07.2003)

Applicant

ZF FRIEDRICHSHAFEN AG et al

1. Transmittal of the translation to the applicant.

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

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The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

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3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

| | | |
|--|---|---|
| Applicant's or agent's file reference 7840 I WO P GEB-FRI | FOR FURTHER ACTION | See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) |
| International application No. PCT/EP2003/007161 | International filing date (day/month/year) 04 July 2003 (04.07.2003) | Priority date (day/month/year) 10 July 2002 (10.07.2002) |
| International Patent Classification (IPC) or national classification and IPC B60K 41/00 | | |
| Applicant ZF FRIEDRICHSHAFEN AG | | |

| |
|--|
| <p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>1</u> sheets.</p> |
| <p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application |

| | |
|--|--|
| Date of submission of the demand 20 January 2004 (20.01.2004) | Date of completion of this report 20 July 2004 (20.07.2004) |
| Name and mailing address of the IPEA/EP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/007161

I. Basis of the report

1. This report has been drawn on the basis of (Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.):

 the international application as originally filed. the description, pages 1-12, as originally filed,

pages _____, filed with the demand,

pages _____, filed with the letter of _____,

pages _____, filed with the letter of _____.

 the claims, Nos. _____, as originally filed,

Nos. _____, as amended under Article 19,

Nos. 1-9, 11, filed with the demand,Nos. 10, filed with the letter of 19 April 2004 (19.04.2004),

Nos. _____, filed with the letter of _____.

 the drawings, sheets/fig 1/1, as originally filed,

sheets/fig _____, filed with the demand,

sheets/fig _____, filed with the letter of _____,

sheets/fig _____, filed with the letter of _____.

2. The amendments have resulted in the cancellation of:

 the description, pages _____ the claims, Nos. _____ the drawings, sheets/fig _____

3. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|--------|------|-----|
| Novelty (N) | Claims | 1-11 | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | 1-11 | YES |
| | Claims | | NO |
| Industrial applicability (IA) | Claims | 1-11 | YES |
| | Claims | | NO |

2. Citations and explanations

1. INTRODUCTION

This report makes reference to the following document:

D1: EP-A-1 093 986 (TOYODA AUTOMATIC LOOM WORKS),
25 April 2001 (2001-04-25)

2. NOVELTY

2.1 Claims 1-9

2.1.1 Document D1 is considered to constitute the prior art closest to the subject matter of independent claim 1 and discloses:

2.1.2 a method for controlling the functions of an industrial vehicle having a drive engine (10), a clutch (21, 22), a service brake (46) that acts on the vehicle wheels (14), a working device (43) and a hydraulic pump (column 8, lines 38-41) which supplies the actuators (23, 24) at the clutch (21, 22), the service brake (46) and the working device (43) with a hydraulic medium via hydraulic pipes.

2.1.3 The subject matter of claim 1 therefore differs from that of D1 in that

2.1.4 the clutch opens automatically and the service brake closes automatically when the load upon the working device of the vehicle exceeds a pre-set threshold or is actuated so as to exceed said threshold.

2.1.5 The subject matter of independent claim 1 is therefore novel (PCT Article 33(2)).

2.1.6 The same applies to dependent claims 2-9.

2.2 Claims 10 and 11

2.2.1 Document D1 is considered to constitute the prior art closest to the subject matter of independent claim 1 and discloses:

2.2.2 a device for controlling the functions of an industrial vehicle having a drive engine (10), a clutch (21, 22), a service brake (46) acting on the vehicle wheels (14), a working device (43) and a hydraulic pump (column 8, lines 38-41) which supplies the actuators (23, 24) at the clutch (21, 22), service brake (46) and working device (43) with a hydraulic medium via hydraulic pipes.

2.2.3 The subject matter of independent claim 10 therefore differs from that of D1 in that

2.2.4 the clutch opens automatically and the service brake closes automatically when the load upon the working device of the vehicle exceeds a pre-set threshold or is actuated so as to exceed said threshold.

2.2.5 The subject matter of independent claim 10 is therefore novel (PCT Article 33(2)).

2.2.6 The same applies to dependent claim 11.

3. INVENTIVE STEP

3.1 Problem addressed

3.1.1 In driving operation and with an actuated vehicle brake, a very high power loss occurs in the torque converter, while the pump wheel driven by the drive engine rotates at the so-called 'standstill speed'. The power consumed by the torque converter is very high in this mode of operation, and fuel consumption is correspondingly increased.

3.2 Solution

3.2.1 The method as per claim 1 and the device as per claim 10 solve this problem in that the clutch opens automatically and the service brake closes automatically when the load upon the working device of the vehicle exceeds a pre-set threshold or is actuated so as to exceed said threshold.

3.2.2 For these reasons, the solution to this problem, as proposed in claims 1 and 10 of the present application, involves an inventive step (PCT Article 33(3)).

3.3.3 The same applies to dependent claims 2-9 and 11.

4. INDUSTRIAL APPLICABILITY

4.1 The invention is industrially applicable in the field of industrial machines.